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AMENDMENT TRANSMITTAL LETTER (Large Entity)

Applicant(s): Mikko Lipsanen et al.

Docket No.
P09430-US1Serial No.
09/700,585Filing Date
February 2, 2001Examiner
Keith FergusonGroup Art Unit
2683

Invention: CALL INFORMATION OUTPUT IN A TELECOMMUNICATION NETWORK

TO THE ASSISTANT COMMISSIONER FOR PATENTS:

Transmitted herewith is an amendment in the above-identified application.

The fee has been calculated and is transmitted as shown below.

CLAIMS AS AMENDED

	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST # PRV. PAID FOR	NUMBER EXTRA CLAIMS PRESENT	RATE	ADDITIONAL FEE
TOTAL CLAIMS	9 -	20 =	0	x \$18.00	\$0.00
INDEP. CLAIMS	3 -	3 =	0	x \$86.00	\$0.00
Multiple Dependent Claims (check if applicable) <input type="checkbox"/>					
TOTAL ADDITIONAL FEE FOR THIS AMENDMENT					\$0.00

- No additional fee is required for amendment.
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Signature

Sidney L. Weatherford
Reg No. 45,602

Dated: November 12, 2003

Ericsson Inc.
6300 Legacy Drive, M/S EVW 2-C-2
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Appl. No. 09/700,585
Amtd. Dated November 12, 2003
Reply to Office action of August 15, 2003
Attorney Docket No. P09430
EUS/J/P/03-3146

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Mikko Lipsanen et al. § Group Art Unit: 2683
Serial No: 09/700,585 § Examiner: Keith Ferguson
Filed: February 2, 2001 §
§

For: CALL INFORMATION OUTPUT IN A TELECOMMUNICATION NETWORK

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Date: November 12, 2003

Name: Jacqueline Wilson

Signature: *Jacqueline Wilson*

Dear Examiner:

REPLY UNDER 37 C.F.R §1.111

In response to the Office action of August 15, 2003, the Applicants submit the following amendments and remarks.

AMENDMENTS

Amendments to the Specification begin on page 2 of this paper and include an attached sheet containing an Abstract of the Disclosure.

Amendments to the Claims are reflected in the Listing of the Claims which begins on page 3 of this paper.

Amendments to the Drawings begin on page 6 of this paper and include an attached replacement sheets.

Remarks/Arguments begin on page 7 of this paper.

Appl. No. 09/700,585
Amtd. Dated November 12, 2003
Reply to Office action of August 15, 2003
Attorney Docket No. P09430
EUS/J/P/03-3146

Amendments to the Specification:

A separate sheet containing an Abstract of the disclosure, as instructed, is attached.

Appl. No. 09/700,585
Amdt. Dated November 12, 2003
Reply to Office action of August 15, 2003
Attorney Docket No. P09430
EUS/J/P/03-3146

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method of providing information relating to a telecommunication call, in a telecommunication network, to a data storage system, the method comprising:

receiving caller identity information at an exchange of the network during a call set-up procedure between a calling device and the exchange, and storing the information at least temporarily at the exchange;

sending an incoming call alert message to a called device; and

prior to receiving a call answer message at the exchange, or in direct response to receipt of a call answer message, outputting from the exchange to said data storage system a Call Data Record containing at least the received and stored caller identity information.

2. (Original) A method according to claim 1, wherein the telecommunication network comprises a cellular radio telephone network and the call is made from a cellular radio telephone device.

3. (Original) A method according to claim 2, wherein the cellular radio telephone network is a GSM network and said exchange from which the Call Data Record is output is a Mobile Switching Center, the method comprising

outputting from the Mobile Switching Center at least one of the subscriber telephone number, IMEI code, or IMSI code.

4. (Original) A method according to claim 1, wherein the telecommunication network comprises a fixed access network in which telephone device is coupled to the exchange via land lines, the method comprising outputting from the exchange at least the caller's telephone number (A-number).

Appl. No. 09/700,585
Amtd. Dated November 12, 2003
Reply to Office action of August 15, 2003
Attorney Docket No. P09430
EUS/J/P/03-3146

5. (Previously Presented) A method according to claim 1 and comprising outputting said call data record to an external billing system.

6. (Currently Amended) Apparatus for providing information relating to a telecommunication call, in a telecommunication network, to a data storage system [[(10)]], the apparatus comprising:

first receiving means [[(8)]] for receiving caller identity information at an exchange [[(1)]] of the network during a call set-up procedure between a calling device [[(4)]] and the exchange [[(1)]], and for storing the information at least temporarily at the exchange [[(1)]];

transmitting means [[(9)]] for transmitting an incoming call alert message to a called device [[(5)]];

second receiving means [[(9)]] for receiving, in the event that the called device [[(5)]] answers or otherwise accepts the incoming call alert, a call answer message sent to the exchange [[(1)]]; and

output means [[(11)]] for outputting, prior to or in response to receipt of said call answer message, from the exchange [[(1)]] to said data storage system [[(10)]], a Call Data Record containing at least the received and stored caller identity information.

7. (Currently Amended) Apparatus according to claim 6, wherein said first and second receiving means [[(8,9)]], said transmitting means [[(9)]]], and said output means [[(11)]] are provided as an integral part of the network exchange [[(1)]], and said data storage system (10) is physically separate from the exchange [[(1)]].

8. (Currently Amended) Apparatus according to claim 6, the network comprising a cellular radio telephone network and said exchange [[(1)]] being a Mobile Switching Centre (MSC) of the cellular network.

Appl. No. 09/700,585
Amld. Dated November 12, 2003
Reply to Office action of August 15, 2003
Attorney Docket No. P09430
EUS/J/P/03-3146

9. (Currently Amended) A telecommunication network having a plurality of interconnected exchanges for routing calls in the network, and a billing system coupled to each of said exchanges, each exchange comprising:

first receiving means [[(8)]] for receiving caller identity information during a call set-up procedure between a calling device [[(4)]] and the exchange [[(1)]], and for storing the information at least temporarily at the exchange [[(1)]];

transmitting means [[(9)]] for transmitting an incoming call alert message to a called device [[(5)]] or to a called device [[(5)]] via one or more further exchanges [[(1)]];

second receiving means [[(9)]] for receiving, in the event that the called device [[(5)]] answers or otherwise accepts the incoming call alert, a call answer message sent to the exchange [[(1)]]; and

output means [[(11)]] for outputting, prior to or in response to receipt of said call answer message, from the exchange [[(1)]] to a data storage system (10), a Call Data Record containing at least the received and stored caller identity information.

Appl. No. 09/700,585
Arndt. Dated November 12, 2003
Reply to Office action of August 15, 2003
Attorney Docket No. P09430
EUS/J/P/03-3146

Amendments to the Drawings:

The attached sheets of drawings replace the original sheets of drawings and include changes to Figures 1 and 3.

Reference labels were added to the components numbered 1, 2, 6, 8, 9, 10, 11 in Figure 1. Reference labels were added to components numbered 1 and 10 in Figure 3.

Attachment: Replacement Sheets

Appl. No. 09/700,585
Amtd. Dated November 12, 2003
Reply to Office action of August 15, 2003
Attorney Docket No. P09430
EUS/J/P/03-3146

REMARKS/ARGUMENTS

Claim Rejections – 35 U.S.C. § 103 (a)

Claims 1, 4-7 and 9 were rejected under 35. U.S.C § 103(a) as being unpatentable over Rainey et al. (US 6,205,210 B1) (hereinafter Rainey) in view of Buscher et al (US 5,506,893) (hereinafter Buscher). The Applicants respectfully traverse the rejection.

The Rainey reference appears to disclose automatic message accounting that stores actual call routing set-up at the time of a call being answered by a called subscriber station. The set-up is packaged in a data field of a message that is then sent upstream through the actual call routes.

The Buscher reference is cited to supply the missing element of outputting a Call Data Record (CDR) to a data storage system (billing system). Buscher seems to disclose delivering a CDR to a customer in real time during progression of the call and/or immediately after the call has been terminated. (Abstract) Also, Buscher discloses that "delivering a call record in real time" means that a call record is delivered to the pertinent customer when the associated call is in progress immediately after the call has been terminated, (Col. 3, lines 30-38).

The present invention, as described by Claim 1, discloses receiving caller identity information at an MSC during call setup. The MSC temporarily stores the information and sends an incoming call alert message to the called device. If the MSC receives a call answer message, at least the received and stored caller identity information is output from the MSC to the data storage system. (Abstract). As noted in the last element of Claim 1, "prior to receiving a call answer message at the exchange, or in direct response to receipt of a call answer message..." a Call Data Record containing at least the received and stored caller information" is sent to the data storage system. This makes possible, for example, real-time billing and fraud detection prior to or during a call.

Neither Rainey nor Buscher suggest sending a partial CDR, as in the present invention (Page 8, Lines 19–26) to the data storage system prior to receiving a call

Appl. No. 09/700,585
Amtd. Dated November 12, 2003
Reply to Office action of August 15, 2003
Attorney Docket No. P09430
EUS/J/P/03-3146

answer message. In fact the Buscher reference teaches away from sending a partial CDR to the data storage system prior to receiving a call answer message. (Col. 4, Lines 6-12). The Applicants respectfully assert that Claim 1 is thus patentable over Rainey and Buscher and a combination of Rainey and Busher. This being the case, independent Claims 6 and 9, which contain limitations analogous to those limitations in Claim 1 are also patentable over the Rainey and Buscher references. Furthermore, dependent Claims 4, 5 and 7, which contain the same novel limitations found in their respective independent claims are also patentable over the Rainey and Buscher references and a combination of these references. Therefore, reconsideration and withdrawal of this ground of rejection is respectfully requested.

Claims 2 and 8 were rejected under U.S.C § 103(a) as being unpatentable over Rainey in view of Buscher and further in view of Amin et al. (US 6,373,931 B1) (hereinafter, Amin). The Applicants respectfully traverse the rejection.

The Amin reference appears to disclose providing a wireless (cellular telephone) subscriber with the capability of changing the assignment of the party that pays for a call. Amin was cited only for teaching a cellular network with billing features. It is respectfully submitted that Amin does not address the above-identified deficiencies of Rainey and Buscher with respect to the Applicants' invention. The combination of the Rainey, Busher and Amin references fails to teach sending a partial CDR prior to receiving a call answer message. Therefore, the rejection of Claims 2 and 8 under 35 U.S.C. 103(a) stands traversed. The allowance of Claims 2 and 8 is respectfully requested.

The Examiner rejected claim 3 under 35. U.S.C § 103(a) as being unpatentable over Rainey in view of Buscher and Amin and further in view of Plush et al. (US 6,173,171 B1) (hereinafter, Plush). The Applicants respectfully traverse the rejection.

The Plush reference seems to disclose a billing method and apparatus for a cellular system, which includes a GSM network. In particular, the MSC is noted as the element which is missing from the other references and from which the CDR is output. However, Plush does not teach or suggest the element missing from Rainey, Buscher and Amin, which is sending a partial CDR prior to receiving a call answer message.

Appl. No. 09/700,585
Amtd. Dated November 12, 2003
Reply to Office action of August 15, 2003
Attorney Docket No. P09430
EUS/J/P/03-3146

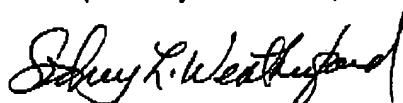
Therefore, the present invention is patentable over the art of record for at least the reasons provided above with respect to Claim 3. In addition, Applicant submits that there is no suggestion or motivation in Rainey, Buscher, Amin or Plush to combine the references to teach the claimed invention. The allowance of Claim 3 is respectfully requested.

CONCLUSION

In view of the foregoing remarks, the Applicants believe all of the claims currently pending in the Application to be in a condition for allowance. The Applicant, therefore, respectfully requests that the Examiner withdraw all rejections and issue a Notice of Allowance for Claims 1-9.

The Applicants request a telephonic interview if the Examiner has any questions or requires any additional information that would further or expedite the prosecution of the Application.

Respectfully submitted,



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Appl. No. 09/700,585
Attorney docket No. P09430-US1
EUS/J/P03-3146

ABSTRACT OF THE DISCLOSURE

A method of providing information relating to a telephone call, in a GSM cellular radio telephone network, to a data storage system. The method comprises receiving caller identity information at a Mobile Switching Centre (MSC) of the network during a call set-up procedure between a mobile station and the MSC and storing the information at least temporarily at the MSC. An incoming call alert message is sent by the MSC to a called device. In the event that the called device answers or otherwise accepts the incoming call alert, a call answer message is sent to the MSC. In response to receipt of the call answer message, at least the received and stored caller identity information is output from the MSC to the data storage system.

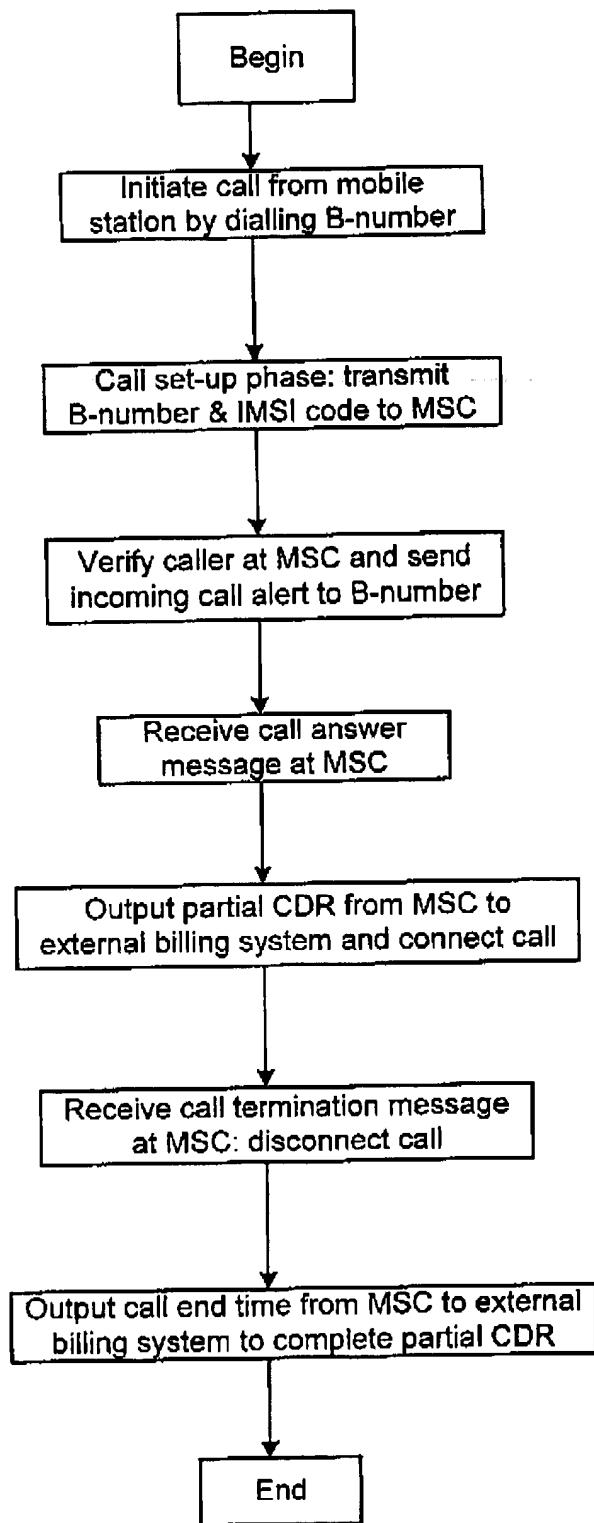


FIG 2

Replacement Sheet

